EPA Potential Changes to Proposed Vapor Intrusion Remedy
Middlefield-Ellis-Whisman (MEW) Study Area, Mountain View, CA

As EPA has been soliciting public comment on the Proposed Plan for the Vapor Intrusion Pathway for the Middlefield-Ellis-Whisman Study Area (or MEW Site), we have received information that has prompted us to take another look at how the preferred alternatives are structured. Changes being considered from the preferred alternatives set forth in the July 2009 Proposed Plan are: (1) allowing for a broader selection of sub-slab system options for existing and future commercial buildings, and (2) changing EPA's preferred alternative for existing commercial buildings to installation of a sub-slab system unless use of the HVAC system meets the remedial objective and is implementable on a long-term, ongoing basis.

Sub-Slab System Options for Commercial Buildings: EPA has received information about the implementability of types of sub-slab systems that had not been identified in the Proposed Plan as the preferred alternative for existing or future commercial buildings. For existing buildings, while EPA assessed the implementability of installing sub-slab systems in existing buildings as lower than that of the HVAC system alternative due to the disruption associated with drilling through an existing building's floor and slab, we understand that installing sub-slab systems in existing buildings may in fact be feasible in many circumstances, including installing sub-slab systems by drilling in from the perimeter of the building footprint. Therefore, the preferred alternative will be to look at a range of sub-slab options for that building, not just those that are installed through the building floor and slab, and then select the sub-slab system best suited to the building that is capable of reducing volatile organic compound (VOC) concentrations to below indoor air action levels. As discussed below, the remedy would still allow for use of a building's HVAC system for existing buildings if the property/building owner agrees to use, operate, and monitor the HVAC systems in a manner consistent with the operations and maintenance plan developed for that specific building.

Additionally, for future commercial buildings, initial comments on the Proposed Plan have indicated there is a strong desire for EPA to allow for a range of sub-slab system options. Each building will have different conditions that make certain types of sub-slab systems more or less implementable and more or less desirable for property owners and building lessees. EPA would like to provide the flexibility needed to select the appropriate sub-slab system for each building. Therefore, where EPA's preferred alternative set forth in the July 2009 Proposed Plan for future commercial buildings had been installation of a sub-slab passive ventilation system with vapor barrier (and ability to convert to active) on properties overlying low groundwater concentrations and installation of a sub-slab/sub-membrane depressurization system on properties overlying higher groundwater concentrations, EPA is now considering selecting a vapor intrusion remedial alternative that would instead identify only that a sub-slab system capable of reducing VOC concentrations to below action levels be installed, rather than prescribing a particular type of sub-slab system.

Preferred Alternative for Existing Commercial Buildings: EPA has also received information about the logistics and implementability of the use of the HVAC system as the preferred alternative for existing buildings. Currently, EPA's preferred alternative for existing commercial buildings is use of the HVAC system unless the building does not have an existing HVAC system or if the HVAC system is unable to sufficiently reduce VOC concentrations below indoor air action levels; in these cases the preferred alternative is installation of a sub-slab/membrane depressurization system. Commercial property owners and building lessees have expressed concerns regarding the logistics, cost, and uncertainty

regarding the long-term operation, maintenance, and monitoring of the HVAC systems that would be required to ensure that the remedy is actually operating. Additionally, EPA has learned that there may be several buildings with security and cleaning crews occupying the buildings during after normal business hours but for at least 8 hours a day. In some of these buildings, operation of the HVAC system for much longer periods of time than estimated in the June 2009 Supplemental Feasibility Study for the Vapor Intrusion Pathway would result in a significant increase in energy costs and wear and tear on system components. Also, property owners have expressed concern that this would significantly raise energy consumption and increase their ecological footprint. For these reasons, in certain buildings it may not be preferable to use the HVAC system as the selected remedy.

Therefore, EPA is considering selecting a vapor intrusion remedy wherein installation of an appropriate sub-slab system is the preferred alternative for existing commercial buildings. However, in instances where the existing HVAC system is both capable of meeting EPA's objective of achieving the indoor air action levels and the logistics and cost to use, operate, and monitor the HVAC system in that manner are shown to be feasible and reliable.